

ABSTRACT

To provide vinyl-urethane copolymers that can form cured articles having excellent hot-water resistance, water resistance, heat resistance, and weather resistance, and to
5 provide production methods thereof.

A vinyl-urethane copolymer contains at least one vinyl polymer chain and at least one urethane polymer chain, in which the vinyl polymer chain is combined with the urethane
10 polymer chain through a linkage segment having a silicon-oxygen bond.

A method produces a vinyl-urethane copolymer comprising at least one vinyl polymer chain and at least one urethane polymer chain, in which the vinyl polymer chain is combined
15 with the urethane polymer chain through a linkage segment having a silicon-oxygen bond, by following Steps (X) and (Y): Step (X) of carrying out preparation of an aqueous dispersion or aqueous solution of a urethane polymer (A) having at least one silicon-containing hydrolyzable group;
20 and Step (Y) of, in the aqueous dispersion or aqueous solution of the urethane polymer (A) having at least one silicon-containing hydrolyzable group, carrying out polymerization of an ethylenically unsaturated monomer (B) and carrying out preparation of a vinyl-urethane copolymer
25 using a compound (C) having at least one functional group

reactive with a silicon-containing hydrolyzable group and at least one functional group reactive with an ethylenically unsaturated bond-containing group in at least one period selected from before the polymerization reaction, during the
5 polymerization reaction, and after the polymerization reaction.